

# Notice of Allowability

Application No.

10/543,163

Examiner

Nathan Bloom

Applicant(s)

NAKANISHI ET AL.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communications filed on: 07/21/2005.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 07/22/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20070928
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Metzger on 09/28/2007.

The application has been amended as follows:

Line 1 of claim 2 is now amended as follows: add --according to claim 1--

2. The image processing apparatus according to claim 1 wherein said detection means detects the

Line 1 of claim 23 is now amended as follows: add --according to claim 18--

23. The imaging apparatus according to claim 18 wherein said image correcting

Lines 7-8 of claim 2 are now amended as follows: delete "Li" and replace --L1--, delete "[ ]" replace -- $\alpha$ --

by said detection means, and L3 is said length L1 multiplied by a preset coefficient  $\alpha$ .

Lines 7-8 of claim 10 are now amended as follows: delete "Li" and replace --L1--, delete "[ ]" replace -- $\alpha$ --

the position of his/her mouth, and L3 is said length L1 multiplied by a preset coefficient  $\alpha$ .

Lines 7-8 of claim 18 are now amended as follows: delete "Li" and replace --L1--, delete "[ ]" replace -- $\alpha$ --

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by said detection means, and L3 is said length L1 multiplied by a preset coefficient  $\alpha$ .

***REASONS FOR ALLOWANCE***

2. Claims 1-26 allowed.

3. The following is an examiner's statement of reasons for allowance:

Instant claim 1 requires the extraction of a face area from an image, detection of the contour of a face region, classification of a face shape based on the detected contour, and correction of the contour based on the face shape classification. The detection, extraction, and classification of a face contour are all known in the art as is evidenced by Fukuma (US 2006/0104478) whom describes these 3 steps for the purpose of matching styles of glasses to a particular facial shape. The transformation or warping of a facial contour is also known in the art as is evidenced by Takemoto (US 7212674) whom describes the warping of facial shapes for template matching. However, neither Takemoto nor the known prior art teaches the correction of a facial contour based on the classification of its shape. Furthermore, based on this discussion claims 9 and 17 are allowable over the known prior art as are the depending claims 2-8, 10-16, and 19-26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Shum (US 2005/0100243) –teaches transformation of a facial contour.

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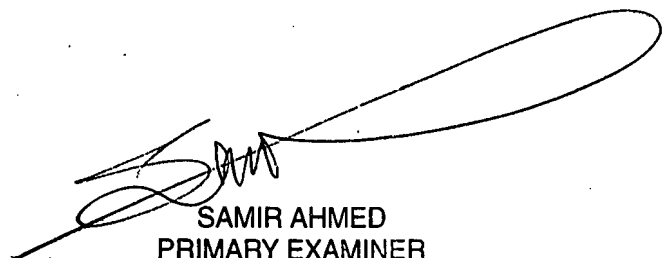
- Prokoski (US 6529617) – facial fingerprinting, classifies based on facial features but no correction of contour.
- Velazquez (US 2003/0161506) – identifies as a face/non-face region and then corrects for red-eye.
- Shiota (US 2002/0006226) – extracts facial image and calculates a mean shape then shades based on created face model.
- Zhang (US 2005/0180657) – warps shapes (contours).

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Bloom whose telephone number is 571-272-9321. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed, can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SAMIR AHMED  
PRIMARY EXAMINER